WHAT IS CLAIMED IS:

1. A route optimization method for a communication system that allows communication between a mobile terminal and a correspondent terminal, for optimizing a route for communication between the correspondent terminal and the mobile terminal when the mobile terminal moves across network domains, comprising the steps of:

causing a foreign agent or a home agent of a network domain to which the correspondent terminal currently belongs to receive a Binding Update Message from a home agent for the mobile terminal and to forward a packet destined for the mobile terminal to a care-of address of the mobile terminal specified in the Binding Update Message.

2. The route optimization method according to claim 1, further comprising the steps of:

causing the foreign agent or the home agent of the network domain to which the correspondent terminal currently belongs to repeat transmission of a Binding Request Message to the home agent for the mobile terminal in order to acquire the latest care-of address; and

causing the home agent for the mobile terminal to transmit, in response to the Binding Request Message, a Binding Acknowledge Message containing the latest care-of address of the mobile

terminal to the foreign agent or the home agent of the network domain to which the correspondent terminal currently belongs.

3. The route optimization method according to claim 1, further comprising the steps of:

causing the foreign agent or the home agent of the network domain to which the correspondent terminal belongs to combine a plurality of Binding Request Messages for obtaining the care-of addresses of a plurality of mobile terminals into an extended Binding Request Message and to send the extended Binding Request Message, when the plurality of mobile terminals are coupled to the same home agent.

4. The route optimization method according to claim 3, wherein the foreign agent or the home agent of the network domain to which the correspondent terminal currently belongs uses subnet masking to maintain a list of home agents capable of interpreting an extended Binding Request Message, so as to send the extended Binding Request Message for the plurality of mobile terminals to the home agent capable of interpretation and send the Binding Request Message for each mobile terminal to the other home agents.

5. The route optimization method

according to claim 3, wherein

the home agent for the mobile terminal notifies the foreign agent or the home agent of the network domain to which the correspondent terminal currently belongs whether the home agent is capable of interpreting the extended Binding Request Message, and

the foreign agent or the home agent of the network domain to which the correspondent terminal currently belongs dynamically determines whether the home agent for the mobile terminal is capable of interpreting the extended Binding Request Message, based on the notification, so that the foreign agent or the home agent sends the extended Binding Request Message for the plurality of mobile terminals to the home agent capable of interpreting the extended Binding Request Message and sends the Binding Request Message for each mobile terminal to the home agent.

6. The route optimization method according to claim 2, wherein the foreign agent or the home agent of the network domain to which the correspondent terminal currently belongs accepts only the Binding Update Message from the selected home agents.

7. The route optimization method according to claim 6, wherein the foreign agent or the home agent of the network domain to which the

correspondent terminal currently belongs uses a subnet mask to maintain a list of home agents originating the acceptable Binding Update Message.

8. The route optimization method according to claim 1, wherein the foreign agent or the home agent forwards only the packet from the selected correspondent terminals to the mobile terminal.

9. The route optimization method according to claim 8, wherein the foreign agent or the home agent uses a subnet mask to designate a group of correspondent terminals with respect to route optimization.

10. The route optimization method according to claim 2, wherein the foreign agent or the home agent of the network domain to which the correspondent terminal currently belongs controls an interval of transmission of the Binding Request Message in accordance with a frequency of change of the care-of address.

11. The route optimization method according to claim 10, wherein the foreign agent or the home agent of the network domain to which the correspondent terminal currently belongs sets an initial value of priority of update for each mobile terminal, computes the priority of update in

accordance with the frequency of change of the care-of address, and sets the interval of transmission of the Binding Request Message in accordance with the priority of update.

12. The route optimization method according to claim 1, wherein the foreign agent or the home agent of the network domain to which the correspondent terminal currently belongs maintains a plurality of care-of addresses for the mobile terminal and forwards the packet destined to a home address of the mobile terminal to each of the plurality of care-of addresses.

13. The route optimization method according to claim 1, wherein the foreign agent or the home agent of the network domain visited by the correspondent terminal acquires the care-of address of the mobile terminal from the foreign agent or the home agent of the network domain from which the visiting correspondent terminal arrives.

14. The route optimization method according to claim 2, wherein the foreign agent or the home agent of the network domain to which the correspondent terminal currently belongs monitors a volume of packets destined for the mobile terminal or packets from the mobile terminal so as to control update of the care-of address of the mobile terminal in accordance with the monitored volume.

15. The route optimization method according to claim 2, wherein the foreign agent or the home agent suspends update of the care-of address when the correspondent terminal moves out of the network domain.

16. The route optimization method according to claim 15, wherein the foreign agent or the home agent resumes the suspended update of the care-of address when a predetermined condition is met.

17. An agent apparatus for a communication system in which a mobile terminal communicates with a correspondent terminal, operated as a foreign agent or a home agent for a network domain to which the correspondent terminal belongs, comprising:

a receiver for receiving a Binding Update Message from a home agent for the mobile terminal; and

a transmitter for forwarding a packet destined for the mobile terminal to a current care-of address of the mobile terminal designated in the Binding Update Message.